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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,550	02/02/2001	Jared Zerbe	1726.7220800	9988

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EXAMINER

LAU, TUNG S

ART UNIT PAPER NUMBER

2863

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/776,550

Applicant(s)

ZERBE ET AL.

Examiner

Tung S Lau

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-10, 12, 14, 15 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 11, 13, 16 and 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3-17-2004
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Applicant's arguments filed 5-17-2004, with respect to pending claims have been fully considered and are persuasive. The final action of 11-20-2003 has been withdrawn in view of the IDS filed 3-17-2004.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 9, 6, 7, 8, 10, 14, 15, 17, 18, 19, 20 are rejected under 35

U.S.C. 102(e) as being anticipated by Maddux et al. (U.S. Patent 6,421,801).

Regarding claim 1:

Maddux discloses a digital signaling system comprising: a transmit circuit, the transmit circuit comprising a transmit data input and a transmit data output, the transmit circuit producing a transmit data output signal at the transmit data output based a transmit data input signal from the transmit data input when the transmit circuit normal mode (Col. 6, Lines 28-49), the transmit circuit further comprising a transmit operating in a repeating pattern generator producing a repeating pattern signal, the transmit circuit producing the transmit data output signal at the

transmit data output based on the repeating pattern signal when the transmit circuit is operating in a test mode (Col. 6, Lines 50-65); and a receive circuit, the receive circuit operably coupled to the transmit circuit and receiving the transmit data output signal from the transmit circuit at a receive data input, the receive circuit comprising a receive data output, the receive circuit producing a receive data output signal at the receive data output based on the transmit data output signal when the receive circuit is operating the normal mode (Col. 6, Lines 28-49), the receive circuit further comprising a receive repeating pattern generator producing the repeating pattern signal, the receive circuit (Col. 6, Lines 50-65).

Regarding claim 9:

Maddux discloses a method for evaluating a digital signaling system comprising the steps of: generating a transmit repeating pattern in a transmit circuit (Col. 6, Lines 28-65, fig. 7, unit 750); transmitting the transmit repeating pattern to a receive circuit; generating a receive repeating pattern in the receive circuit (Col. 6, Lines 28-65, fig. 7, unit 755); and comparing the transmit repeating pattern repeating pattern to obtain a comparison the receive repeating pattern to obtain a comparison (Col. 6, Lines 28-65, fig. 7, unit 725).

Regarding claims 6, 7, 8, 10, 14, 15, 17, 18, 19, 20:

Maddux discloses representing two bits of information over a single conductors (fig. 4, unit 405) in reference to ground (fig. 4, unit 405, 410); over two conductors (fig. 4, unit 420); pattern as a signal reference to ground (Col. 6, Lines 28-65, fig. 4, unit 405); transmit pattern over pair of conductors (Col. 6, Lines 28-65, fig. 4,

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unit 420); adjust a receiver characteristic of the circuit (abstract, fig. 7, unit 725, 755); using a voltage reference (Col. 1, Lines 16-32, fig. 4, unit 415); to determine reliability operation (Col. 1, Lines 28-50); based on boundary values (Col. 9-10, Lines 64-3); based on comparison (fig. 7, unit 725).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

a. Claims 2, 3, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maddux et al. (U.S. Patent 6,421,801) in view of Chao et. al. (U.S. Patent 6,671,847).

Maddux discloses a system including the subject matter discussed above except shift register. Chao discloses the use of shift register (Col. 5, Lines 12-63); in order to be able to an easy design and inexpensive system (Col. 1, Lines 44-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Maddux to have the use of shift register taught by Chao in order an easy design and inexpensive system (Col. 1, Lines 44-58).

***Claim Objections***

4. Claims 4, 5, 11, 13, 16, 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitation of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: prior art fail to teach linear feedback logic, a group consisting of crosstalk cancellation coefficient and self-equalization coefficient, two bits of information on a single conductor simultaneously.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

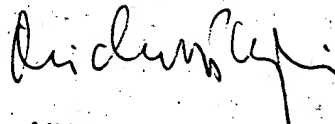
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 571-272-2274. The examiner can normally be reached on M-F 9-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned is 703-872-9306

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TL

Th 5-22-04



**MICHAEL NGHIEM  
PRIMARY EXAMINER**